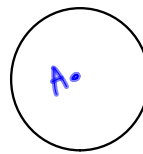


Ch 10 Circles

10-1 Use Properties of Tangents

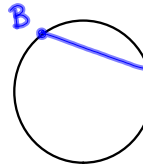
10-2 Find Arc Measures



Circle--the set of all points in a plane equidistant from a given point

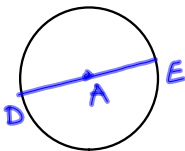
Center--given point

Circle A $\odot A$



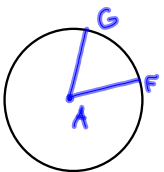
Chord--segment whose endpoints are on the circle

\overline{BC}

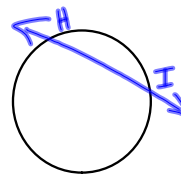


Diameter--chord that passes through the center

\overline{DE}

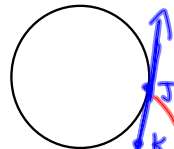


Radius--segment whose endpoints are the center and a point on the circle



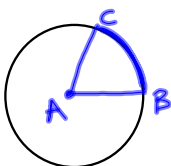
Secant--line that contains a chord; intersects the circle in two points

\overleftrightarrow{HI} is a secant
 \overline{HI} is a chord



Tangent--line that intersects the circle in exactly one point

\overleftrightarrow{JK}
point of tangency

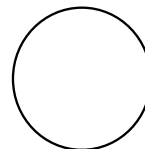


Central Angle--Angle whose vertex is the center and whose sides are radii.

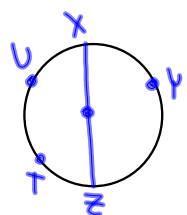
$\angle CAB$

Central angle intercepts an arc.

$\angle CAB$ intercepts \widehat{CB}



Arc--part of the circle



Minor Arc-- $<180^\circ$ (2 letters)

ex \widehat{XY}
 \widehat{TZ}

Major Arc-- $>180^\circ$ (3 letters)

\widehat{XTY}

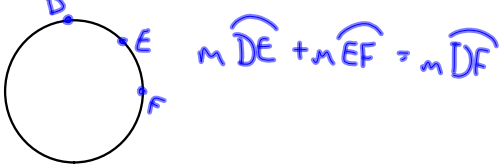
Semicircle-- 180° (3 letters)

\widehat{XUZ}

Measure of the central angle = measure of the intercepted minor arc

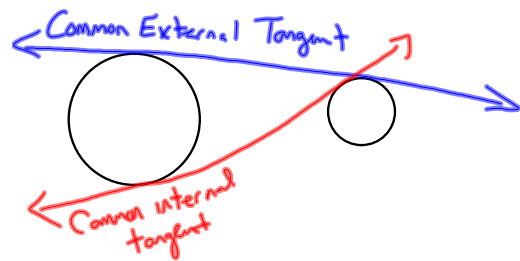
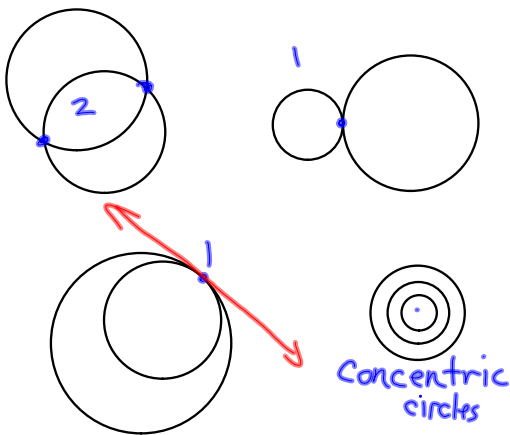
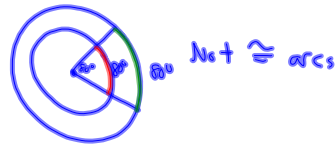


Postulate 23--Arc Addition Postulate--

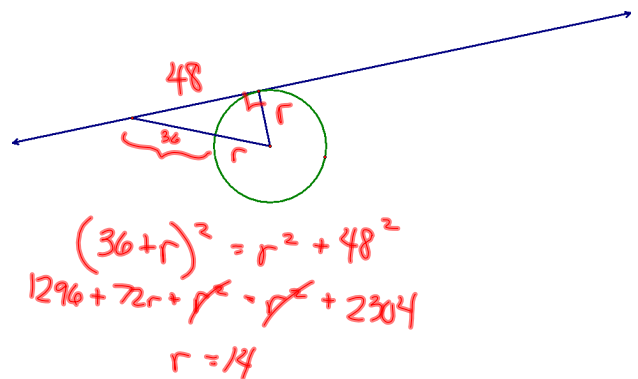
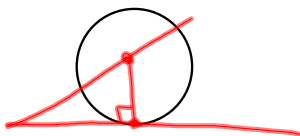


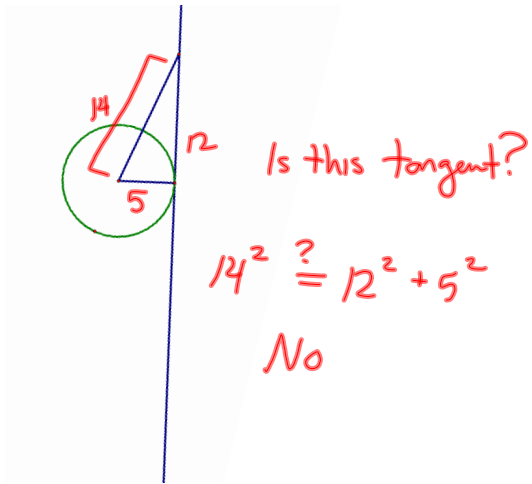
Congruent circles--circles with the same radius

Congruent arcs--arcs with the same measure that are in the same circle or congruent circles

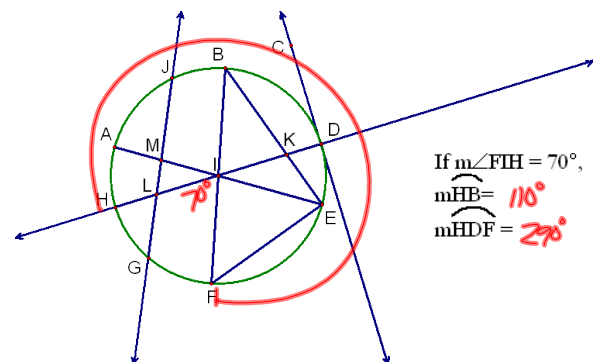
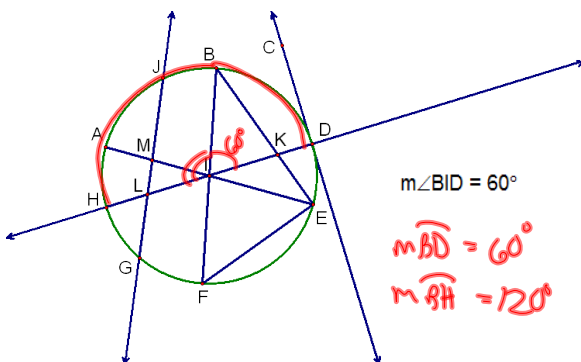
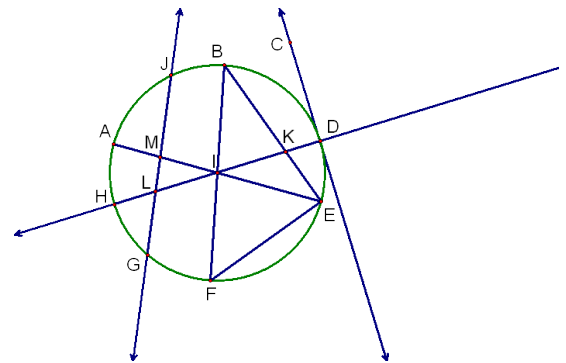
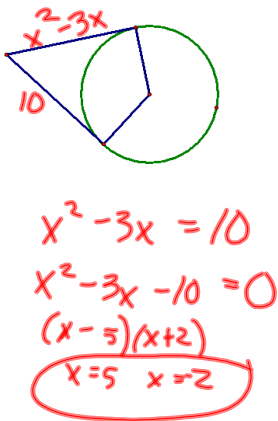
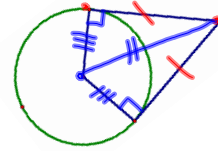


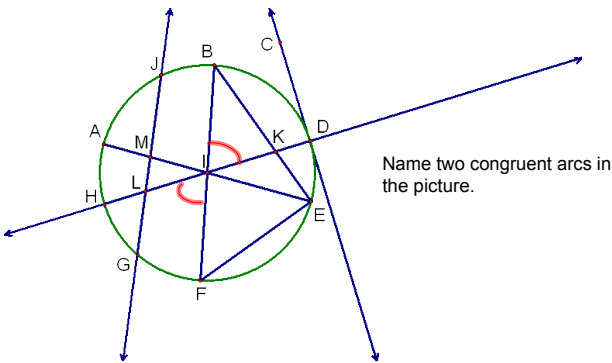
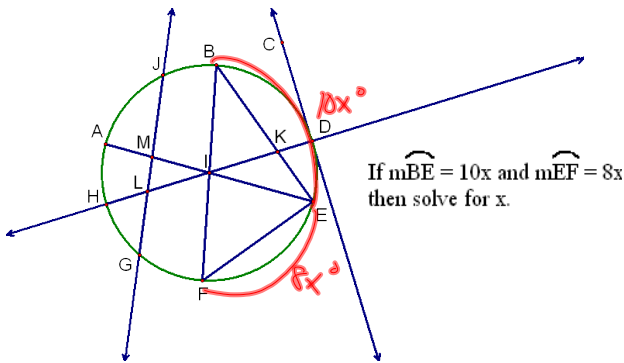
Theorem 10.1--In a plane, a line is tangent to a circle iff the line is perpendicular to a radius of the circle at its endpoint on the circle



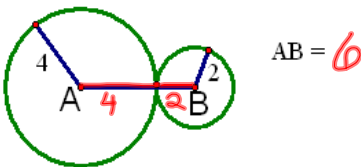
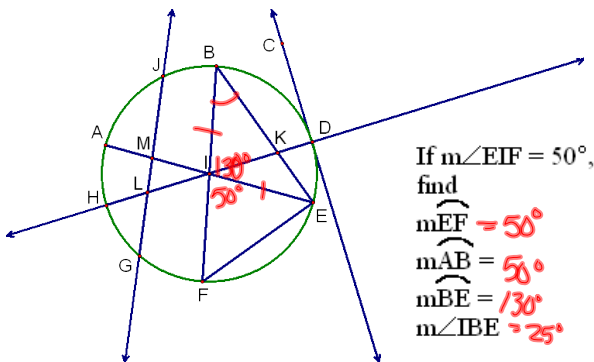


Theorem 10.2--Tangents from the same external point are congruent.

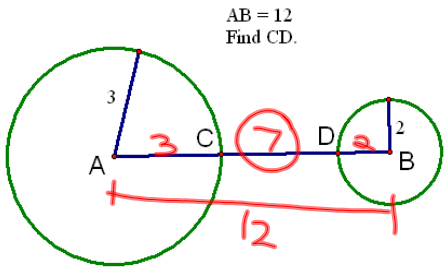




Name two congruent arcs in the picture.



$AB = 6$



$AB = 12$
Find CD .

HW
p655-657
#s 3-10, 15-22, 25
p661-662
#s 3-10, 21 (hint sohcahtoa)